Amendment to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-44. Cancelled.

45. (New) A device for emitting waves in an underground formation, comprising at least one vibrator including two slabs, at least one motive element suited to generate vibrations and to communicate the vibrations to the slabs, and a generator for applying periodic control signals to the at least one motive element, where the at least one vibrator is positioned in a well or cavity and embedded in at least one solid material providing coupling thereof with the underground formation, the at least one material being in contact with the two slabs over at least part of each of the respective faces thereof, and where the at least one vibrator comprises means for further increasing coupling of the at least one vibrator with the at least one solid material.

46. (New) A device as claimed in claim 45 wherein the means for increasing coupling, comprises anchor bars associated with at least one of the slabs.

47. (New) A device as claimed in claim 45, wherein each slab comprises at least two plates disposed at a distance from one another and connected by anchor bars.

48. (New) A device as claimed in claim 47, wherein an outer surface of each plate is provided with an uneven relief to increase an area of coupling of the device with the coupling material.

49. (New) A device as claimed in claim 46, wherein the anchor bars are provided with an uneven relief to increase the area of coupling of the device with coupling material.

50. (New) A device as claimed in claim 47, wherein the anchor bars are provided with an uneven relief to increase the area of coupling of the device with coupling material.

51. (New) A device as claimed in claim 48, wherein the anchor bars are provided with an uneven relief to increase the area of coupling of the device with coupling material.

52. (New) A device as claimed in claim 45, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

53. (New) A device as claimed in claim 46, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

54. (New) A device as claimed in claim 47, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

55. (New) A device as claimed in claim 48, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

56. (New) A device as claimed in claim 49, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

57. (New) A device as claimed in claim 50, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

58. (New) A device as claimed in claim 51, wherein the slabs are perforated so as to facilitate penetration of the coupling material in a space contained between the two slabs.

59. (New) A device as claimed in claim 45 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

60. (New) A device as claimed in claim 46 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

61. (New) A device as claimed in claim 47 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

62. (New) A device as claimed in claim 48 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

63. (New) A device as claimed in claim 49 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

64. (New) A device as claimed in claim 50 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

65. (New) A device as claimed in claim 51 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

66. (New) A device as claimed in claim 52 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

67. (New) A device as claimed in claim 53 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

68. (New) A device as claimed in claim 54 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

69. (New) A device as claimed in claim 55 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

70. (New) A device as claimed in claim 56 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

71. (New) A device as claimed in claim 57 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

72. (New) A device as claimed in claim 58 wherein each vibrator comprises a pillar of elements coated with a protective sheath, the at least one solid material being in contact with the protective sheath and the two slabs over at least part of each of the respective faces thereof.

73. (New) A method of generating in an underground formation vibrational signals according to an oriented emission pattern, comprising :

installing in a well vibrators each comprising two slabs, at least one motive element for generating vibrations and to communicate the vibrations to the two slabs and a generator for applying periodic control signals to the motive element, each vibrator being positioned in a well or cavity and embedded in at least one solid material providing coupling thereof with the underground formation, the at least one solid material being in contact with the two slabs over at least part of each of the respective faces thereof and where each vibrator comprises means for further increasing coupling of the at least one vibrator with the at least one solid material; and

sequentially controlling the vibrators by means of a control with time lags between respective triggering times that depend on intervals between locations of the vibrators and a velocity of propagation of waves in the formations surrounding the well, so as to obtain a directive emission.

74. (New) A method as claimed in claim 73, wherein sequential control of the vibrators comprises applying to the vibrators control signals at a fixed frequency f whose phase Φ_i is related to said frequency f and to the time lag by a relation

$\Phi_i = 2\pi.f.t_i$.

75. (New) A method as claimed in claim 73, wherein sequential control of the vibrators comprises applying to the vibrators control signals of fixed frequencies so as to allow separation thereof.

76. (New) A method as claimed in claim 73, comprising coupling with the formation surrounding the well a seismic receiver and determining traveltimes of the waves respectively between each vibrator and receiver.

77. (New) A method as claimed in claim 73, comprising adding to the vibrators receivers connected to a signal acquisition and processing unit and sequential triggering of the vibrators with time lags between the respective triggering times calculated by the unit by calculating a time lag between the signals produced by the receivers.